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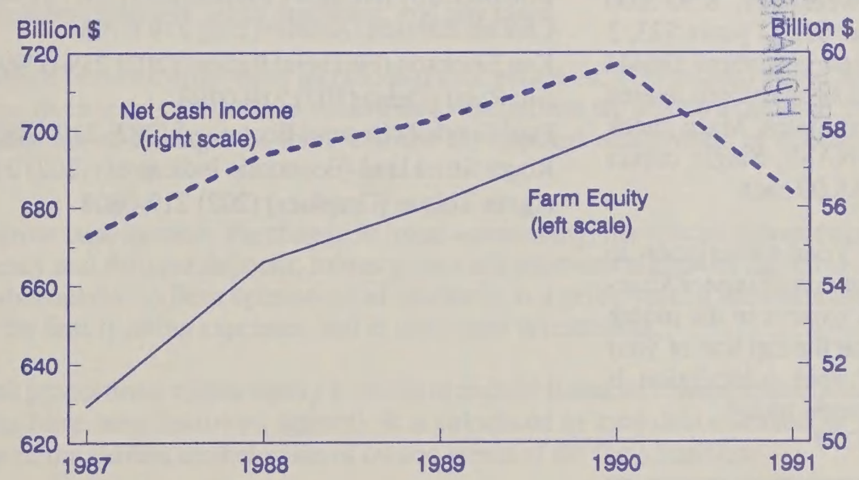
September 1991

Agricultural Income and Finance

Situation and Outlook Report

Farm Equity Increasing in Face of Declining Net Incomes



1991 forecast.

Agricultural Income and Finance Situation and Outlook. Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture, September 1991, AFO-42.

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Approved by the World Agricultural Outlook Board. Summary Wednesday, September 11, 1991. The next summary of the *Agricultural Income and Finance Situation and Outlook* is scheduled for release on Monday, December 16, 1991. Summaries of Situation and Outlook reports may be accessed electronically through the USDA CID system. For details, call (202) 447-550

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Summary

Farm income prospects have improved since early summer, but 1991 farm income is still below last year's figure, which has been revised upward. Net cash income is forecast down 5 percent from the 1990 record of nearly $60 billion, while net farm income is down about 10 percent from $50 billion. Falling cash grain production and low dairy prices are causing incomes to slip from 1990's record. The forecast for Government payments remains unchanged at $8 to $9 billion.

Total crop receipts are forecast 3 percent above the 1990 record. U.S. grain supplies have tightened considerably from midsummer forecasts. Corn and soybean production forecasts are well down from earlier projections, due mainly to the drought that has plagued many parts of the Corn Belt. But in response to the drought, corn prices have jumped and should compensate for yield decreases. However, wheat cash receipts are expected to fall 16 percent from a year earlier because production is expected to decline 26 percent.

Cotton production is forecast up some 14 percent from 1990 and even if cotton prices average somewhat lower, receipts will increase. Fruit receipts are also high as prices have risen to reflect last winter's freeze in California.

Total livestock and dairy prices are forecast to slip 3 percent from the 1990 record. Red meat receipts are about uchanged from 1990 as a very slight icrease in cattle and calf receipts compensates for somewhat lower hog receipts. Dairy receipts will be down an estimated 12 percent. Broiler receipts continue to fall from 1989's high, but turkey receipts are up 2 percent.

Led by labor expenses, short term interest expenses, and seed costs, 1991 production expenses are forecast up 1 percent. Expenses for feed are likely to fall 1 percent, as are outlays for feeder livestock.

The farm sector's balance sheet continues to improve. Farm real estate assets are forecast to increase 2-3 percent in 1991, while farm debt rises by less than 1 percent. This will cause farm equity to rise 1-2 percent for the year.

The general economy's recovery from the most recent recession likely began sometime in the second quarter. For the rest of this year, economic growth is expected to accelerate. Faster growth is expected in 1992 with continued moderate inflation and steady improvement in the jobs picture. This suggests increased domestic demand for agricultural products.

A special article in this issue of Agricultural Income and Finance covers State-level farm income and balance sheet estimates for 1990. (Previously, only forecasts were available at the national level.) Net income was strong in 1990, reflecting the effects of favorable weather on crop production and strong cattle and hog prices.

GLOSSARY OF FARM INCOME AND FINANCE

Net cash income—is the difference between cash receipts, farm related income, and direct Government payments and cash expenses. This cash-based concept measures the total income farmers receive in a given year, regardless of the year in which the marketed output was produced. It indicates the availability of funds to cover cash operating costs, finance capital investments and savings, service debts, maintain living standards, and pay taxes.

Net farm income—is the difference between gross farm income and total expenses. This accrual-based concept measures the profit or loss associated with a given year's production. Additions to inventories are treated as income. Nonmoney items such as depreciation, the consumption of farm-grown food, and the net imputed rental value of operator dwellings are included.

Net cash flow—is the sum of: gross cash income, the change in loans outstanding, net rent to nonoperator landlords, and the net change in farmers' currency and demand deposits; minus gross cash expenses and gross capital expenditures. This financial indicator measures cash available to farm operators and landlords in a given year. It indicates the ability to meet current obligations and provide for family living expenses, and to undertake investments.

Debt/asset ratio—measures both proportional owner equity in the farm and the financial risk exposure of the operation (the extent to which the farm's assets have been borrowed against). It is calculated as total debt outstanding as of January 1, divided by the farmer's estimate of the current market value of owned assets of the farm business.

Equity level—measures net worth. It is the hypothetical balance that would remain from the sale of assets and paying off existing debt. It is calculated as sector assets minus sector debt outstanding.

Current and inflation-adjusted dollars—In this report, dollar values of income, expense, asset, and debt items, unadjusted for the effects of inflation, are referred to as current or nominal dollars. Current or nominal figures, which indicate the purchasing power prevailing in the cited year, do not allow for fully accurate comparisons across time. To allow for meaningful comparisons across time, adjustments for the effects of inflation are made. Adjusted figures use a 1982 base and are interchangeably referred to as real, constant dollar, or inflation-adjusted.

Farm Income Outlook

Cash Income Off 5 Percent in 1991

Falling cash grain production and low wheat and dairy prices are causing incomes to slip from 1990's record.

August crop report showed supplies of U.S. grains tightening considerably from midsummer forecasts. U.S. corn and soybean production forecasts are well down from earlier projections, due mainly to the drought that has plagued many parts of the Corn Belt. However, in response to the drought, corn prices have jumped and should compensate for yield decreases. Last December's freeze in California raised citrus prices substantially in the fruit sector.

Farm income prospects have improved since the June issue of *Agricultural Income and Finance*, but 1991 farm income is still below a year earlier. Net cash income is currently forecast at $54 to $59 billion and net farm income at $41 to $46 billion, well above previously published estimates. Most of this change comes about because new preliminary estimates of 1990 incomes are up from earlier forecasts. So, the percent change between the 2 years is the same as earlier.

Receipts for Most Grains Dropping

Cash grain production is forecast down 9 percent this year. The largest single reduction is for oats (27 percent), but oats only account for some 5 to 7 million acres. More important in its effect on U.S. cash receipts is wheat, where production is expected to decline 26 percent. But because world wheat stocks are still high, prices are not rising sufficiently to compensate for the lower quantities, causing wheat receipts to fall some 16 percent. Wheat receipts are forecast at $5 to $7 billion, compared with last year's $6.8 billion, while the jump in corn prices is pushing corn receipts to $13 to $15 billion.

Cotton production is forecast up 14 percent and, even with somewhat lower prices, will result in $5 to $6 billion in receipts. Fruit receipts are also high because prices have risen to reflect of last winter's freeze in California.

Red Meats Steady, Dairy Still Down

Total livestock and dairy receipts are forecast at $85 to $89 billion. Red meat receipts are about unchanged from 1990 as a very slight increase in cattle and calf receipts compensates for somewhat lower hog receipts. Broiler receipts are continuing to fall from 1989's high, but turkey receipts are up 2 percent.

More dramatic in its effect on the livestock and dairy subsector was the collapse in milk prices in August 1990. Despite very strong prices during January through mid-August 1990, the overall effect on both 1990 and 1991 annual prices was dramatic. Lower milk prices will leave 1991 dairy receipts down an estimated 12 percent. The large drop for dairy is the primary cause for the 3 percent fall in all 1991 livestock receipts. The sum of crop and livestock receipts will fall 1 percent.

Expenses Up $2 Billion

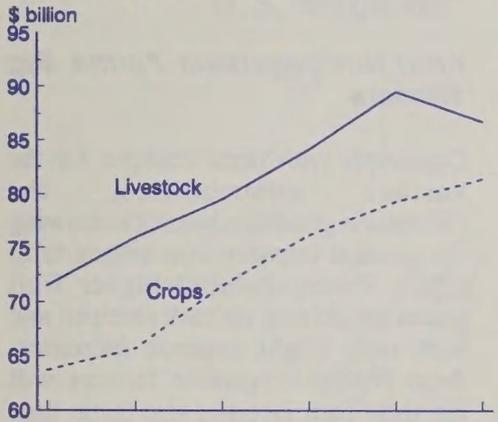
Total 1991 production expenses are forecast between $145 and $150 billion. While not increasing as much as during the past few years, this is still an increase of 1 percent, led by labor costs, short-term interest expenses, and seed costs. Labor expenses are forecast to increase 5 percent. As a percent of total expenses, however, interest and seed costs are much less important than inputs such as feed and labor. Feed expenses are falling 1 percent, as are those for feeder livestock, as a drop in numbers of cattle on feed eclipses higher feed prices.

Government Payments Still Down

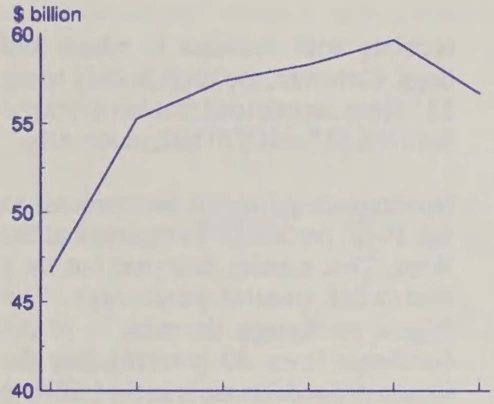
The forecast for Government payments is unchanged at $8 to $9 billion. With the August *Crop Production* report showing less corn and with the season-average price forecast higher than during the summer, corn deficiency payments will fall. The extent of the decline in payments will not be felt until calendar 1992. Advance payments have already been made and are included in these 1991 payment forecasts. Five-month payments, reflecting the new price and quantity forecasts for corn, will not be made until calendar 1992, so they will not appear in the accounts until 1992 payments are forecast.

Net cash income is forecast down $1 billion to $6 billion in 1991. Gross cash income will fall at most $4 billion while cash expenses will rise at most $3.6 billion. Crop receipts are above 1990 and livestock receipts are below.

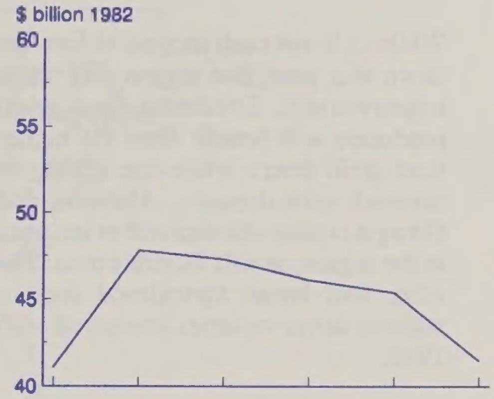
Cash Receipts



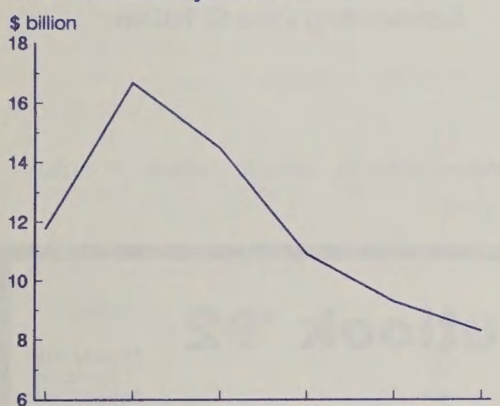
Net Cash Income



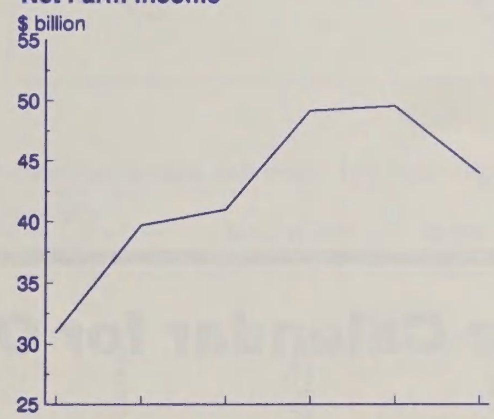
Real Net Cash Income



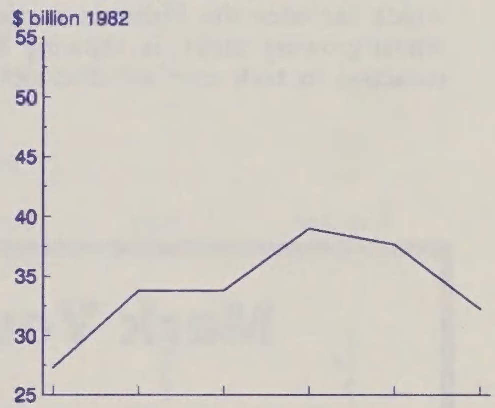
Government Payments



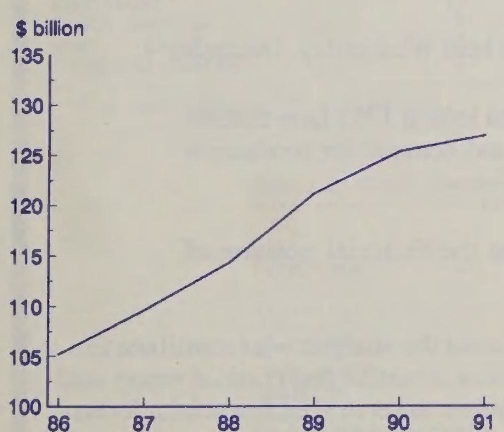
Net Farm Income



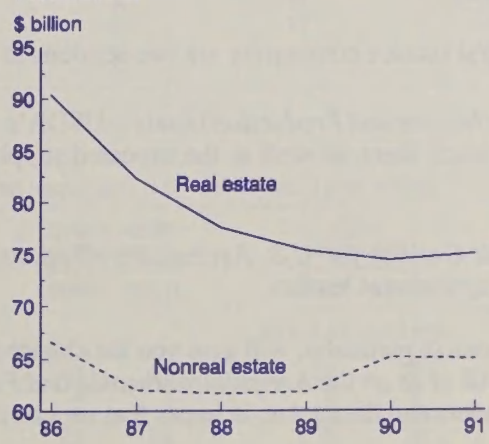
Real Net Farm Income



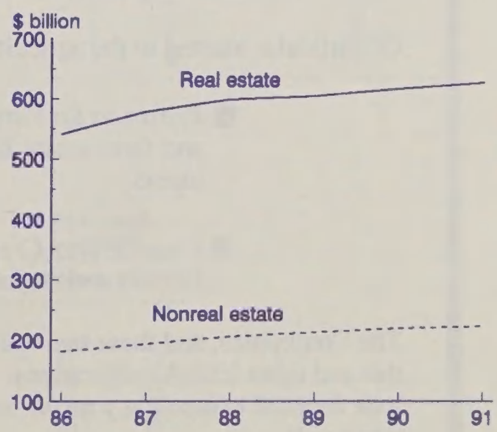
Cash Expenses



Farm Debt



Farm Assets



1990-91 forecast.

Southeast Only Region with Higher Income

The depressed wheat subsector is affecting incomes in most major production regions. Escape from high fruit prices and drought, however, are benefitting the Southeast.

While U.S. net cash income is forecast down this year, one region will show improvement. Southeast feed grain producers will benefit from the higher feed grain prices while not having to contend with drought. Alabama and Georgia cotton will also add to incomes in the region, as will Florida citrus. The other four broad agricultural regions will see lower incomes compared with 1990.

Crop receipts will be up some 12 percent in the Southeast, 4 percent in the Northeast, and 2 percent in the West, while livestock receipts are expected to fall across all regions. The Midwest, which includes the Nation's major wheat-growing areas, is showing a reduction in both crop and livestock receipts with declines in wheat and hogs. However, the drop is only some $1 billion out of a total that has averaged between $65 and $70 billion recently.

Government payments are forecast to fall 10-20 percent in all regions but the West. This mimics last year but by a somewhat smaller percentage. The largest percentage decrease is in the Northeast (over 20 percent), but the largest dollar decrease is in the Midwest ($500 to $700 million). The rise in western payments is only slightly over 1 percent, leaving an 11-percent decline for the Nation as a whole.

Fruit/Nut/Vegetable Farms Big Winners

Consistent with price changes for the various commodities, the fruit/nut/vegetable subsector is showing the greatest improvement among farm types. Freeze-induced higher fruit prices are driving up cash receipts, and with only slight expense increases, these fruit/nut/vegetable farmers will see their cash incomes rise faster than any other group of farmers or ranchers. This single group is responsible for the overall increase in income for crop farms as a whole, as cash grain farms suffer from low wheat prices and their incomes drop some $1 billion.

Mark Your Calendar for Outlook '92

USDA's annual Agricultural Outlook Conference is scheduled for December 3-5 in Washington, D.C. Secretary of Agriculture Edward Madigan will open the Conference addressing new opportunities for U.S. agriculture. Special emphasis is being placed on how to turn environmental needs into farm opportunities, expanding opportunities in trade, nutrition and food labeling, and the status of the President's rural development initiative. Many of these focus sessions will be broadcast nationwide on satellite.

Of particular interest to the agricultural finance community are two sessions to be held Wednesday, December 4:

- *Prospects for Farm Income and Production Inputs*—USDA's first look at 1992 farm income and farm sector balance sheet, as well as the expected supply and demand for production inputs.

- *Finance and Credit Outlook for U.S. Agriculture*—Reports on the financial position of farmers and major agricultural lenders.

The Conference, and these two sessions in particular, will give you the chance to meet the analysts who contribute to this and other USDA publications. All of us on the *Agricultural Income and Finance Situation and Outlook* report staff look forward to meeting you, our readers and data users, in hopes that we can continue to serve your financial information needs.

Between 30 and 40 percent of U.S. net cash income is generated in the Midwest, nearly twice the amount of any other region. There will be winners and losers as wheat growers' incomes drop but corn growers' incomes rise.

U.S. Regions

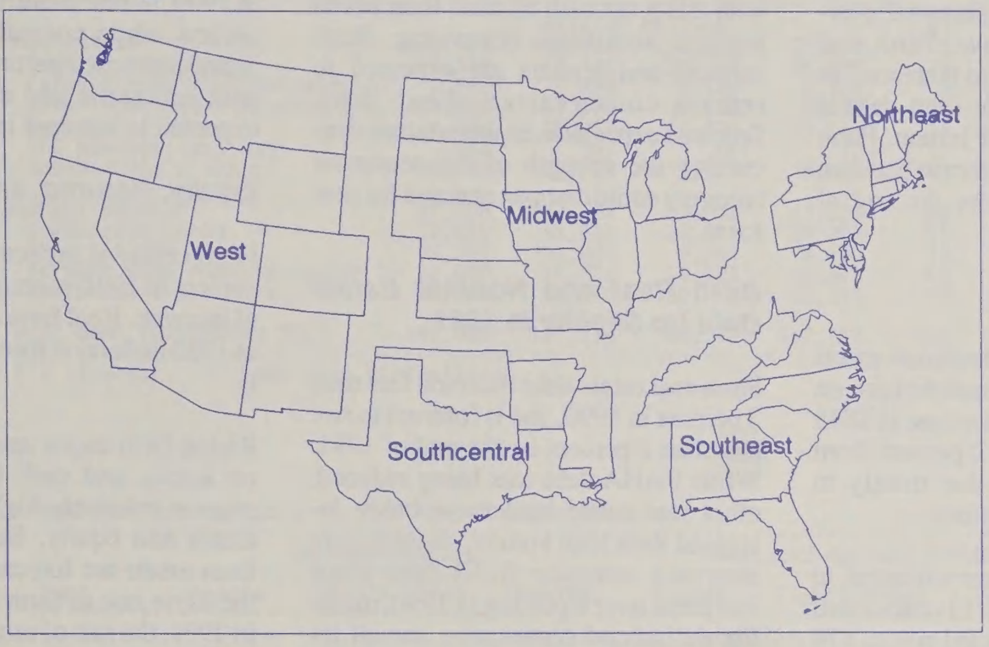


Table 1--Annual changes in cash income components show decreases for most regions

	Cash receipts: Crops	Cash receipts: Livestock	Government payments	Gross cash income	Cash expenses	Net cash income
	Percent					
1990P						
Northeast	5	2	-28	2	2	3
Midwest	10	8	-13	6	3	12
Southeast	-3	3	-26	-1	3	-6
South Central	7	7	-22	3	2	3
West	2	7	3	3	4	1
United States	5	7	-15	3	3	4
1991F						
Northeast	4	-2	-21	1	12	-16
Midwest	-3	-1	-11	-2	4	-17
Southeast	13	-3	-16	6	3	10
South Central	-3	-6	-17	-6	-6	-6
West	2	-7	1	-1	2	-8
United States	1	-3	-11	-1	2	-9

P = preliminary, F = forecast.

Table 2--Cash income and expenses for selected farm types

Farm type	Gross cash income 1990P	Gross cash income 1991F	Cash expenses 1990P	Cash expenses 1991F	Net cash income 1990P	Net cash income 1991F
	Billion dollars					
Cash grain	43	42	30	30	13	12
Tobacco	3	3	2	2	1	1
Cotton	6	6	3	3	4	3
Fruit/nut/vegetable	21	23	8	8	13	15
Total crops	90	91	61	62	29	29
Red meat	56	56	44	44	13	12
Poultry	14	13	4	4	9	9
Dairy	24	22	18	18	6	4
Total livestock	96	93	65	65	31	28

P = preliminary, F = forecast.

Farm Assets and Equity Up as Farm Income Remains Strong

Farm asset values are rising, led by increases in land values. Debt remains steady, so 1991 farm equity continues to climb.

The U.S. farm sector's financial position continues to improve. Farm real estate assets are forecast to increase 2 to 3 percent in 1991, while farm debt is expected to rise $0 to $1 billion. Farm equity is likely to rise further to between $705 and $715 billion by the end of 1991.

Farm Asset Growth

The value of U.S. agricultural assets (excluding operator households) on December 31, 1991, is forecast at $845 to $855 billion, up 1 to 2 percent from 1990. The increase is due mostly to rising farm real estate values.

Nonreal estate assets are expected to increase slightly in 1991. Livestock and poultry values are expected rise to $70 to $74 billion. The farm value of machinery and equipment, which rose about $1 billion in 1990, is expected to remain stable. The value of crop inventories fell slightly to $22.4 billion in 1990 and likely will rise slightly in 1991. Farm financial assets are expected to remain at about $38 billion through the end of 1991.

Farm Debt Stabilizes

Total farm business debt decreased less than 1 percent in 1990, marking the seventh consecutive year of debt reduction (tables 3 and 4). This trend is expected to reverse in 1991, as total farm business debt is forecast to increase by 1 percent. The $2.1-billion decline in Farmers Home Administration (FmHA) loan balances more than offset the $1.4-billion increase in debt held by all other lenders. FmHA debt could decrease another $4 billion in 1991, as the agency continues to work through its problem loan portfolio.

Demand for agricultural loans did not increase rapidly in 1990, as relatively high net cash income and advance deficiency payments on some 1991 program commodities provided farmers with adequate cash to meet their needs without additional borrowing. Both farmers and lenders are expected to remain conservative about debt-financed expansion, as uncertainty concerning the strength of the economic recovery could dampen demand for new loans.

Both Real and Nonreal Estate Debt Up Slightly in 1991

Farm real estate debt declined less than 3 percent in 1990, and is forecast to rise less than 1 percent by the end of 1991. While FmHA debt was being reduced, other real estate lenders probably increased their loan volume slightly. Life insurance company (LIC) farm loans increased over 6 percent in 1990, marking the second consecutive annual increase in LIC debt. Several life insurance companies anticipate active participation in Farmer Mac and are expected to increase lending efforts. Nevertheless, LIC debt is forecast to rise only 2 percent in 1991.

Nonreal estate debt rose over 2 percent 1990, and probably will increase at a slightly lower rate through the end of 1991. Excluding the anticipated FmHA decrease, loan balances held by other lenders are expected to rise over 3 percent. While farmers' improved financial position has lessened the demand for most nonreal estate loans, farm input suppliers, particularly cooperatives, appear to be offering purchasers favorable terms. Also, a significant increase in machinery purchases would likely raise the demand for loans from commercial banks, Production Credit Associations, and individuals and others (through farm machinery financing corporations).

Commercial banks continued to increase market share during 1990, as banks' real estate loans were up over 3 percent, while nonreal estate loans increased over 2 percent. The Farm Credit System (FCS) registered mixed results in 1990, as real estate debt fell almost 3 percent while nonreal estate loans increased almost 7 percent. FCS loans for both real estate and nonreal estate are expected to increase in 1991.

Equity, Returns, and Cash Flow

Farm equity is expected to be up 2 to 3 percent in 1991, marking the fourth year of increase. Real farm equity (measured in 1982 dollars) is forecast to fall slightly.

Rising farm sector asset values, returns on assets, and cash flow continue to support relatively high returns to farm assets and equity. Because returns to farm assets are forecast to rise at about the same rate as farm real estate values in 1991, the rate of return on farm assets from current income is expected to remain between 4 and 5 percent. The rate of return on equity from current income is expected to range from 3 to 4 percent in 1991.

The projected total real ($ 1982) rate of return on assets, which includes returns from current income and returns from real capital gains, is expected to be between 2 and 3 percent in 1991. This reflects modest increases in land prices and in returns to farm assets. The total real rate of return on equity is also expected to be between 1 and 2 percent.

The spread (total real return on assets minus real cost of debt) is expected to be between -4 and -5 percent in 1991. This suggests that debt financing may be somewhat less profitable for the farm sector in 1991.

Cash flow after interest ($ 1982) was about $45.8 billion in 1990 and is expected to be about $37 to $39 in 1991, reflecting somewhat lower expected real gross cash income and stable real gross cash expenses in 1991.

Table 3--Debt to most lenders is up in 1991

Lender	1983	1985	1987	1989	1990	1991F
		Million dollars			Billion dollars	
Real estate	103,176	100,068	82,387	75,307	73	72 to 76
Federal Land Banks	44,316	42,166	30,642	26,657	25	24 to 26
Farmers Home Administration	8,572	9,820	9,429	8,126	[illegible]	4 to 7
Life insurance companies	11,666	11,270	9,352	9,038	10	9 to 11
Commercial banks	8,347	10,732	13,541	15,544	16	16 to 18
CCC storage facility	888	307	46	12	1/	1/
Individuals & others	29,386	25,773	19,377	15,929	15	15 to 17
Nonreal estate	87,888	77,524	62,012	61,826	65	63 to 67
Commercial banks	37,075	33,738	27,589	29,243	31	31 to 33
PCAs & FICBs	19,392	14,002	9,384	9,490	10	10 to 12
Farmers Home Administration	12,855	14,714	14,123	10,843	11	8 to 10
Individuals & others	18,566	15,070	10,916	12,250	13	12 to 14
Total debt (excluding CCC)	191,064	177,592	144,399	137,133	136	135 to 141

F = forecast. 1/ Less than $500 million.

Table 4--Nominal balance sheet shows improvement1/

Year	Current dollars			Deflated dollars ($1982)2/		
	Assets	Liablilities	Equity	Assets	Liablilities	Equity
			Billion dollars			
1986-88	767.5	146.9	620.6	653.2	125.0	528.2
1989	819.8	137.1	682.7	649.1	108.6	540.5
1990	834.6	136.5	698.1	634.7	103.8	530.9
1991F	845 to 855	137 to 143	705 to 715	626 to 634	102 to 106	523 to 530

F=forecast. 1/ Excludes operator households and CCC commodity loans. 2/ Deflated by the GNP implicit price deflator, 1982=100.

Table 5--Rates of return on farm assets and equity 1/

Year	Returns to assets			Returns to equity		
	Income	Real capital gains	Total	Income	Real capital gains	Total
			Percent			
1986-88	4.3	-1.2	3.1	2.9	-0.7	2.3
1989	5.5	-2.3	3.2	4.5	-1.9	2.6
1990	5.2	-3.2	2.0	4.2	-2.9	1.3
1991F	4 to 5	-2 to -3	2 to 3	3 to 4	-1 to -2	1 to 2

F = forecast. 1/ Excludes operator households. Totals may not add due to rounding. Returns to assets and equity are calculated using the average of the current and previous years' assets and equity, respectively.

General Economy Begins To Recover

Production, employment, interest rates, and inflation statistics show signs of improvement.

The recovery from the most recent recession likely began sometime in the second quarter. Although real GNP posted a small decline in the quarter, the number of nonfarm payroll jobs increased, and the unemployment rate fell slightly. Interest rates remained relatively steady and inflation subsided. For the rest of this year, economic growth is likely to accelerate and be accompanied by modest inflation and declining unemployment. Growth is likely to be above 3 percent in 1992 with continued moderate inflation and steady improvement in the jobs picture.

Production and Employment Recover, But Remain Relatively Low

Production has risen steadily since March. Through July, industrial production had risen at about a 6-percent annual rate, compared with 2.6 percent during 1989, before the latest recession. Despite the recent increases, production levels remain 2.7 percent below their recent peak in September 1990. Factory capacity use has climbed with rising production, but at 78.4 percent for July, it is also well below the 83.9 percent of 1989.

Overall employment data share a pattern similar to production. The number of nonfarm payroll jobs in August was slightly above April, but still 1.3 percent below July 1990. The unemployment rate has generally declined since June, falling from 7 percent to 6.8 percent in August. From 1989 through the first half of 1990, unemployment averaged about 5.3 percent.

Inflation Subsides

Overall consumer prices rose 2.1 percent at an annual rate in the second quarter, down from about 7 percent in the previous 6 months. Through the first 7 months of 1991, inflation was 2.7 percent at an annual rate, well below the 6.1 percent for all of 1990. Falling energy prices have lowered the overall inflation rate, but do not account for all of inflation's recent slackening. The increased unemployment and lower rate of capacity use associated with the 1990-91 recession reduced underlying inflation pressures, and also contributed to slowing inflation. For example, excluding food and energy prices, consumer prices rose at an annual rate of about 3.2 percent during the second quarter, compared with 5.4 percent in 1990.

General Interest Rates Lower

Weak economic activity, slowing inflation, and a Federal Reserve policy aimed at mitigating the recession substantially reduced interest rates during the first 6 months of 1991. Three-month Treasury bill rates fell about 80 basis points during the early part of the year, and were relatively stable at about 5.5 percent in the May-July period. In August, 3-month bills fell to roughly 5.35 percent. During 1991, long term rates have not fallen nearly as much as short rates. For example, 10-year Treasury yields averaged about 8.1 percent in January and about 7.9 percent in August. Long term interest rates reflect current and expected future economic conditions. Many analysts suggest that recent economic developments have had relatively little impact on the longer term outlook, especially for inflation. Thus, while short term rates have fallen significantly, longer term rates—reflecting longer term fundamentals—have not fallen as much.

Recovery Expected To Continue

With the decline in interest rates that has occurred since the July 1990 business cycle peak, and with consumer income and spending beginning to increase, the recovery appears likely to strengthen as the year progresses. Lower interest rates have already sparked an increase in housing starts, which have risen more than 25 percent since their low point in January. Some of the growth in production is expected to be directed at rebuilding inventories, which have been slashed over the last year.

Both the Administration and the Congressional Budget Office forecast real GNP growth slightly above 3 percent for 1992. Barring an unforeseen jump in oil or food prices, the slack that the recession created in the economy should translate into modest inflation over the next several months. If inflation remains moderate, long term interest rates should fall somewhat, even as short term rates rise with the rebounding economy and short term credit demands.

Short Term Agricultural Loan Rates at Commercial Banks Are Lower

In short term credit markets, rates charged by banks for both agricultural and commercial and industrial (C&I) loans have fallen with the declining cost of bank funds. One important source of funds to large commercial banks is large certificates of deposits (CDs). The prime rate tends to reflect the bank's average cost of funds, with a mark-up, over the last few months. From July 1990 through July 1991, large CD rates fell from 8.1 to about 6 percent. However, the average bank prime rate has fallen only about three-fourths as much over the same period.

From August 1990 to May 1991, average C&I loan rates fell from 9.7 percent to about 7.8 percent while average agricultural loan rates dropped to 9.7 percent from nearly 11 percent. The smaller decline in agricultural loan rates primarily reflects the fact that those rates are linked more closely to the bank's average cost of funds, while C&I rates are linked more closely to the bank's marginal cost of funds.

C&I loans, especially large C&I loans, typically make greater use of fixed rate

loan terms based on money market rates (such as the large CD rate) than do short term agricultural bank loans. On the other hand, a greater proportion of agricultural loans are made on a floating-rate basis, tied to the national prime or some other measure of the bank's average cost of funds. The prime tends to adjust more slowly than other money market rates. Therefore, in times of falling money market interest rates, loans tied to the prime (or some other measure of the bank's average cost of funds) will fall more slowly than loans tied to the bank's marginal cost of funds.

Loans tied to the prime have been especially slow to fall. Empirical studies have shown that the prime rate generally takes at least 2 months to fully reflect changes in large CD rates. Some researchers have also argued that the prime rate adjusts more slowly when the cost of bank funds declines than when the cost increases. Recently, the fall in the prime rate has also been slowed by increased concerns of bankers over the quality of borrower debt and bank loans.

Both short term agricultural and nonagricultural interest rates may continue to fall slightly in the very near term, reflecting reductions in the cost of bank funds. As the recovery gains momentum in late 1991 and early 1992, modest increases in loan rates may occur, as other short term rates rise with the accelerating expansion.

Figure 1 - Spread Between Large 3-month CD's and Prime Rates Historically Large

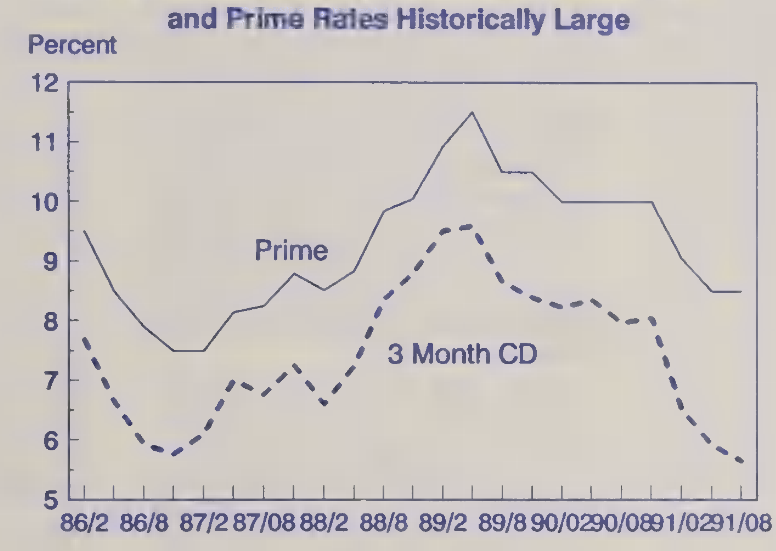
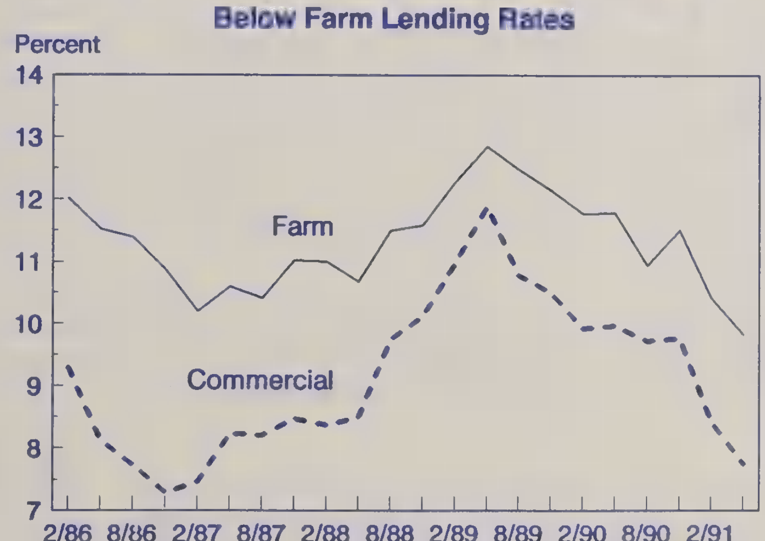


Figure 2 - Commercial Lending Rates Are Well Below Farm Lending Rates



1990 State-level Income and Balance Sheet Estimates

by

Roger Strickland, Bob Williams, Chris McGath, and Ken Erickson1/

Abstract: Newly available State-level data provide more precise information on farm income and balance sheets. Net income was strong in 1990, reflecting the effects of favorable weather on crop production and strong cattle and hog prices.

Keywords: State farm income, State farm balance sheets, farm income and balance sheet

The first release of the 1990 U.S. and State farm income estimates is now available (previously only forecasts at the national level had been available). This reflects the fact that the complete-year data required for the accounts can only be collected and calculated following the end of the year. Much of the critical data for the major commodities and expenses becomes available beginning in April to June. These estimates are "first" estimates, which will be revised over several years as additional data and revisions become available from USDA, and from the Agricultural Census every 5 years. In fact, the estimates reflect State data from the 1987 Census and from the Agricultural Economics and Land Ownership Survey (AELOS), an important follow-on survey to the Census conducted in 1988.

An analysis of farm finances over the 1980's indicates that in 1990, U.S. agriculture continued to recover from the financial crisis that affected U.S. farmers and ranchers earlier in the 1980's. The progress is reflected in the fact that most of the farm sector's income measures reached record highs in each of the last 4 years. A low growth rate in both domestic and import demand for feed grains and soybeans was a contributor to the downturn in the early 1980's. During the recovery, commodity prices rose and farmers restructured individual operations for better cost control. Both developments helped alleviate the price-cost squeeze that held down farm income earlier.

Generally, 1990 was a good year for farmers. Net farm income rose 1.5 percent from 1989 and net cash income was up 4.0 percent. For the second consecutive year no major drought occurred. Crop production was up slightly from the high levels of 1989, and prices for most commodities were relatively high through at least the first half of the year.

States in the Corn Belt and Delta regions were among those most adversely affected by the financial crisis and have now made a substantial recovery. The decline and subsequent rally in farm income over the decade for Iowa and Nebraska in the Corn Belt, and in Louisiana and Mississippi in the Delta region, illustrate the extent of the farm sector's crisis and recovery. On the balance sheet side, recent rises in land values have pushed asset values up while debt has been restructured and reduced.

The $9.1-billion jump in U.S. receipts was led by a $5.5-billion increase in livestock receipts. Crop receipts rose $3.6 billion. Corn accounted for most of the increase as farmers sold more corn in 1990, after rebuilding inventories in 1989 following the drought-induced drawdown of 1988.

Cattle and hogs each contributed in excess of $2 billion to the rise in livestock receipts, as 1990 was a year of higher prices for both. Hog prices topped $60 per hundredweight for part of the year. U.S. cattle prices also reached levels not attained in recent years, with the USDA's published monthly beef cattle prices topping $70 per hundredweight for every month in 1990. Dairy receipts also contributed $800 million to the jump in cash receipts due to higher milk production.

For the Midwest, the 1988 drought was a temporary setback to the recovery from the financial crisis, as this region was the most severely affected by the drought. However, net farm income in the Corn Belt and Lake States has since staged a full recovery due to large advances in gross farm income and relatively small changes in production expenses. A return to normal precipitation yielded higher production, increasing both marketings and inventories. In addition, market prices for cattle, hogs, and corn were favorable within the last 2 years.

Net farm income rose in 23 States in 1990, with a median increase of 9.9 percent. Net farm income in the remaining 27 States showed a median decrease of 14.5 percent. The States with the largest percentage increases tended to be those where cattle are a leading commodity. Kansas' net farm income rose 95 percent from 1989 to 1990. West Virginia, Texas, Wyoming, North Dakota, and South Dakota also registered gains exceeding 25 percent.

State Income Rankings Shift

California and Texas were the top two States in net farm income in 1990. Iowa was the third-ranking State, followed by Minnesota and Florida. States that are big livestock producers tended to prosper in 1990, reflecting favorable livestock prices. These States either maintained or improved their position over the prior year when ranked by income. Overall, the top 10 States accounted for $27.4 billion, or 53.6 percent, of U.S. net farm income, essentially unchanged from 53.2 percent in 1989.

Rankings of net farm income per operation and per acre did not change dramatically either. Little change occurred since both the principal farm-income States (in the Midwest) and the major livestock producing States tend to be lower ranked on a per operation or per acre basis. Corn and livestock tend to be associated with low per operation

and low per acre net farm income. Greenhouse and nursery, and citrus tend to be the opposite. The top 10 States showed no change for per acre net farm income, only some minor shuffling of positions within the top 10. Changes in the composition of the top 10 States for per operation net farm income involved the substitution of Nebraska and South Dakota for Nevada and New Jersey on the lower end, reflecting the increased livestock earnings.

Regionally, both per operation and per acre net farm income were highest in the Southeast, Northeast, and Pacific States. This reflects production of specialty crops and poultry in these regions. Appalachian, Delta, Lake, and Corn Belt States tended to have moderate net farm income per operation and per acre. The Northern Plains, Southern Plains, and Mountain States had high income per operation and low income per acre, indicative of large operations with low-value products on a per acre basis.

Production Expenses

Total production expenses rose 2.9 percent between 1989 and 1990, compared with 4.6 percent between 1988 and 1989, conforming to the smaller increase in commodity production and prices paid for inputs and services. Livestock and poultry purchases increased 12.2 percent, as higher prices received for livestock prompted a 9.3 percent increase in feeder livestock prices. A 13.3-percent jump in energy prices was the principal reason for the 19.4-percent rise in fuel and oil expenditures. Labor expenses, which rose 13 percent, were the other only other accounts showing double-digit increases. Two price-led decreases were significant. Feed expenditures fell 1.3 percent and fertilizer expenditures dropped 1.5 percent because of a 5.9-percent and a 4.4-percent drop in feed and fertilizer prices, respectively.

Among the States there were no dramatic changes in expenses. Only four States' expenses declined: Alaska, Delaware, Nebraska, and Oklahoma; only one State, Nevada, had an increase of more than 10 percent. The large increases in livestock and poultry purchases extended to most States rather than being limited to the principal producing States. Except for California, in the few States where purchases decreased, livestock receipts also fell.

The top 10 States in total expenses remained the same, with only Illinois and Kansas switching places. These States accounted for 51.7 percent of total expenses, the same as last year. Per operation and per acre rankings remained virtually unchanged. Increases in per farm expenses usually occurred because of the number of farms in a State dropped.

Production expenses display the same regional patterns of per acre and per operation levels associated with net farm income. Rankings of per acre net farm income and total expenses coincide well. The same States are in the top 10 in each category with some reordering. Significant differences exist, however, between total and per operation rankings of the two measures. Kansas, Colorado, and Indiana were among the top 10 in total expenses but were outside the top 10 in net farm income. Conversely, North Carolina, Florida, and Washington were outside the top 10 in expenses and among the top 10 in net farm income. In per operation rankings, Kansas, Colorado, Hawaii, and New Mexico were among the top 10 in total expenses but were outside the top 10 in net farm income. Florida, Washington, Connecticut, and Rhode Island were outside the top 10 in expenses and among the top 10 in net farm income.

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Table A-1--Farm marketings, 1989 and 1990, Government payments, 1990 and principal commodities, 1990, by State

State	1989 Farm marketings: Total	1989 Farm marketings: Crops	1989 Farm marketings: Livestock and products	1990 Farm marketings: Total	1990 Farm marketings: Crops	1990 Farm marketings: Livestock and products	1990 Government payments	State rank for total farm marketings, four principal commodities in order of marketing receipts, and percentage of total marketings
	1,000 dollars							
Alabama	2,670,904	696,322	1,974,582	2,737,422	654,909	2,082,513	82,226	25-Broilers, cattle, eggs, peanuts (69%)
Alaska	28,631	19,771	8,860	26,539	18,977	7,562	1,117	50-Greenhouse, dairy prod, hay, potatoes (82%)
Arizona	1,926,022	1,181,836	744,186	1,865,492	1,046,246	819,246	43,349	31-Cattle, cotton, dairy prod, lettuce (64%)
Arkansas	4,156,869	1,496,114	2,660,755	4,259,205	1,552,776	2,706,429	312,696	17-Broilers, soybeans, rice, cattle (67%)
California	18,050,380	12,857,370	5,193,010	18,858,873	13,343,714	5,515,159	252,333	1-Dairy prod, cattle, greenhouse, grapes (39%)
Colorado	3,969,206	1,320,629	2,648,577	4,213,419	1,184,074	3,029,345	236,723	16-Cattle, wheat, corn, dairy prod (80%)
Connecticut	426,259	239,892	186,367	445,901	250,068	195,833	2,123	44-Eggs, greenhouse, dairy prod, tobacco (76%)
Delaware	661,640	159,032	502,608	643,661	183,829	459,832	3,213	41-Broilers, soybeans, corn, greenhouse (82%)
Florida	6,246,284	5,030,897	1,215,387	5,708,300	4,448,019	1,260,281	37,155	9-Greenhouse, oranges, tomatoes, sugar (51%)
Georgia	3,907,761	1,626,283	2,281,478	3,842,186	1,574,081	2,268,105	130,593	14-Broilers, peanuts, eggs, cattle (60%)
Hawaii	585,002	493,215	91,787	587,689	499,245	88,444	519	38-Sugar, pineapples, greenhouse, nuts (74%)
Idaho	2,745,336	1,661,606	1,083,730	2,934,519	1,780,841	1,153,678	133,431	26-Cattle, dairy prod, potatoes, wheat (64%)
Illinois	6,978,820	4,727,437	2,251,383	7,937,793	5,460,821	2,476,972	506,603	5-Corn, soybeans, hogs, cattle (90%)
Indiana	4,281,440	2,455,574	1,825,866	4,930,668	2,871,067	2,059,601	244,170	10-Corn, hogs, soybeans, cattle (75%)
Iowa	9,048,625	3,755,249	5,293,376	10,319,173	4,437,024	5,882,149	753,733	2-Hogs, corn, cattle, soybeans (92%)
Kansas	6,548,317	2,132,274	4,416,043	6,994,864	2,098,649	4,896,215	834,746	7-Cattle, wheat, sorghum grain, corn (83%)
Kentucky	2,924,151	1,266,117	1,658,034	3,098,398	1,400,075	1,698,323	81,610	23-Tobacco, horses, cattle, dairy prod (70%)
Louisiana	1,707,682	1,093,656	614,026	1,921,224	1,284,157	637,067	154,631	32-Soybeans, cotton, cattle, sugar (50%)
Maine	444,038	227,953	216,085	460,387	240,492	219,895	6,982	45-Dairy prod, potatoes, eggs, cattle (75%)
Maryland	1,336,215	477,149	859,066	1,345,165	516,701	828,464	17,386	34-Broilers, dairy prod, greenhouse, cattle (71%)
Massachusetts	433,955	321,032	112,923	418,462	302,525	115,937	3,023	42-Greenhouse, cranberries, dairy prod, eggs (75%)
Michigan	2,922,761	1,611,462	1,311,299	3,183,356	1,785,034	1,398,322	168,831	19-Dairy prod, corn, cattle, hogs (56%)
Minnesota	6,513,260	2,819,850	3,693,410	7,011,173	3,253,477	3,757,696	511,759	6-Dairy prod, corn, cattle, hogs (65%)
Mississippi	2,275,837	981,002	1,294,835	2,432,964	1,111,288	1,321,676	185,969	28-Broilers, cotton, soybeans, cattle (69%)
Missouri	3,920,049	1,751,019	2,169,030	3,938,589	1,667,974	2,270,615	299,065	13-Soybeans, cattle, hogs, corn (71%)
Montana	1,553,782	624,526	929,256	1,605,731	742,052	863,679	299,599	33-Cattle, wheat, barley, hay (85%)
Nebraska	8,725,832	3,079,816	5,646,016	8,845,164	2,807,674	6,037,490	624,646	4-Cattle, corn, hogs, soybeans (87%)
Nevada	243,589	101,556	142,033	333,435	115,085	218,350	5,347	46-Cattle, hay, dairy prod, potatoes (89%)
New Hampshire	138,824	73,429	65,395	133,892	70,720	63,172	1,856	48-Dairy prod, greenhouse, apples, cattle (77%)
New Jersey	661,691	464,363	197,328	647,383	451,510	195,873	15,744	37-Greenhouse, dairy prod, eggs, peaches (49%)
New Mexico	1,458,917	484,706	974,211	1,528,793	482,814	1,045,979	63,840	35-Cattle, dairy prod, hay, chili peppers (74%)
New York	2,853,916	917,270	1,936,646	3,006,046	1,022,887	1,983,159	59,304	21-Dairy prod, greenhouse, cattle, eggs (74%)
North Carolina	4,592,584	2,082,348	2,510,236	4,866,512	2,213,714	2,652,798	73,255	11-Tobacco, broilers, hogs, turkeys (57%)
North Dakota	2,151,510	1,482,514	668,996	2,537,350	1,723,899	813,451	545,378	24-Wheat, cattle, barley, sunflower (69%)
Ohio	3,786,524	2,088,064	1,698,460	4,171,818	2,335,424	1,836,394	197,006	12-Corn, soybeans, dairy prod, hogs (68%)
Oklahoma	3,514,760	1,137,297	2,377,463	3,554,437	1,191,312	2,363,125	319,040	20-Cattle, wheat, dairy prod, broilers (78%)
Oregon	2,284,656	1,546,451	738,205	2,311,783	1,557,088	754,695	89,137	29-Cattle, greenhouse, dairy prod, wheat (47%)
Pennsylvania	3,602,210	991,513	2,610,697	3,767,174	1,053,407	2,713,767	41,414	15-Dairy prod, cattle, greenhouse, eggs (68%)
Rhode island	78,317	65,461	12,856	70,793	58,269	12,524	191	49-Greenhouse, dairy prod, eggs, potatoes (67%)
South Carolina	1,234,700	680,310	554,390	1,175,560	599,038	576,522	62,637	36-Tobacco, cattle, soybeans, dairy prod (43%)
South Dakota	2,982,194	950,887	2,031,307	3,348,717	1,036,068	2,312,649	332,851	22-Cattle, hogs, corn, wheat (73%)
Tennessee	1,945,725	863,290	1,082,435	2,038,610	928,009	1,110,601	91,029	27-Cattle, dairy prod, greenhouse, soybeans (57%)
Texas	10,923,494	4,062,624	6,860,870	11,980,527	4,268,378	7,712,149	974,702	3-Cattle, cotton, dairy prod, greenhouse (69%)
Utah	755,279	188,181	567,098	754,826	178,686	576,140	34,897	39-Cattle, dairy prod, turkeys, hay (71%)
Vermont	429,318	50,247	379,071	446,722	48,951	397,771	5,793	43-Dairy prod, cattle, hay, apples (93%)
Virginia	2,039,137	694,323	1,344,814	2,119,633	740,881	1,378,752	32,378	30-Cattle, dairy prod, broilers, turkeys (57%)
Washington	3,689,120	2,456,532	1,232,588	3,815,779	2,420,139	1,395,640	205,425	18-Dairy prod, cattle, apples, wheat (56%)
West Virginia	310,275	60,316	249,959	338,132	69,517	268,615	6,049	47-Dairy prod, broilers, apples, cattle (70%)
Wisconsin	5,399,559	1,049,982	4,349,577	5,706,149	1,124,923	4,581,226	181,243	8-Dairy prod, cattle, corn, hogs (85%)
Wyoming	827,171	162,735	664,436	766,767	157,193	609,574	31,283	40-Cattle, sheep, sugar beets, hay (86%)
United States	160,892,528	76,761,482	84,131,046	169,987,155	80,363,701	89,623,454	9,298,030	Cattle, dairy prod, corn, hogs (52%)

Table A-2--Net farm income for States, 1989-90

State	1989 Gross farm income	1989 Total production expenses	1989 Net farm income	1990P Gross farm income	1990P Total production expenses	1990P Net farm income
	1,000 dollars					
Alabama	3,032,216	2,188,090	844,126	3,101,572	2,279,010	822,562
Alaska	33,904	25,021	8,883	32,217	24,701	7,516
Arizona	2,105,919	1,402,008	703,911	2,039,222	1,456,940	582,282
Arkansas	4,809,143	3,566,965	1,242,178	4,809,728	3,605,968	1,203,760
California	19,209,405	12,495,758	6,713,647	19,961,620	12,931,262	7,030,358
Colorado	4,571,221	3,804,115	767,106	4,785,406	3,912,298	873,108
Connecticut	462,037	298,083	163,954	496,387	308,339	188,048
Delaware	697,664	507,828	189,836	668,214	497,597	170,617
Florida	6,434,784	3,504,739	2,930,045	5,888,430	3,615,526	2,272,904
Georgia	4,407,148	3,110,627	1,296,521	4,203,139	3,127,186	1,075,953
Hawaii	604,810	499,118	105,692	614,280	529,983	84,297
Idaho	3,176,294	2,181,849	994,445	3,332,126	2,242,139	1,089,987
Illinois	8,956,902	6,940,404	2,016,498	8,898,322	7,193,398	1,704,924
Indiana	5,443,592	4,173,362	1,270,230	5,468,299	4,414,556	1,053,743
Iowa	11,497,252	8,775,463	2,721,789	12,044,668	9,080,291	2,964,377
Kansas	7,797,239	7,090,200	707,039	8,561,112	7,183,079	1,378,033
Kentucky	3,428,992	2,293,583	1,135,409	3,492,329	2,454,223	1,038,106
Louisiana	2,159,598	1,560,402	599,196	2,238,591	1,606,873	631,718
Maine	513,383	365,355	148,028	520,341	369,[illegible]0	150,661
Maryland	1,476,269	1,064,528	411,741	1,491,809	1,064,834	426,975
Massachusetts	489,850	316,843	173,007	479,728	330,867	148,861
Michigan	3,754,772	2,653,703	1,101,069	3,724,320	2,783,839	940,481
Minnesota	8,270,116	5,663,043	2,607,073	8,398,361	5,894,627	2,503,734
Mississippi	2,806,573	2,154,935	651,638	2,815,123	2,199,090	616,033
Missouri	4,865,527	3,792,280	1,073,247	4,704,997	3,831,053	873,944
Montana	2,161,839	1,629,663	532,176	2,097,455	1,710,809	386,646
Nebraska	10,142,283	8,393,989	1,748,294	10,407,965	8,280,008	2,127,957
Nevada	325,133	229,215	95,918	341,406	254,154	87,252
New Hampshire	163,716	123,135	40,581	166,470	126,823	39,647
New Jersey	767,751	491,233	276,518	756,480	509,878	246,602
New Mexico	1,584,252	1,232,562	351,690	1,640,521	1,303,352	337,169
New York	3,140,646	2,260,815	879,831	3,267,420	2,332,949	934,471
North Carolina	5,366,077	3,556,611	1,809,466	5,642,628	3,674,202	1,968,426
North Dakota	3,106,888	2,490,854	616,034	3,463,311	2,661,305	802,006
Ohio	4,546,242	3,450,599	1,095,643	4,782,715	3,610,154	1,172,561
Oklahoma	4,326,551	3,328,983	997,568	4,428,894	3,319,138	1,109,756
Oregon	2,803,552	1,963,698	839,854	2,897,862	2,046,040	851,822
Pennsylvania	3,999,916	2,891,678	1,108,238	4,049,707	2,911,031	1,138,676
Rhode island	86,224	41,565	44,659	78,606	42,057	36,549
South Carolina	1,400,040	1,002,380	397,660	1,276,642	1,002,984	273,658
South Dakota	3,657,826	2,675,916	981,910	4,078,245	2,793,719	1,284,526
Tennessee	2,497,351	1,944,134	553,217	2,456,367	1,995,730	460,637
Texas	13,226,978	10,807,793	2,419,185	14,488,794	11,118,059	3,370,735
Utah	831,989	622,471	209,518	883,113	643,392	239,721
Vermont	481,036	346,892	134,144	485,046	358,249	126,797
Virginia	2,418,386	1,849,714	568,672	2,435,177	1,892,981	542,196
Washington	4,360,108	2,980,638	1,379,470	4,525,025	3,124,007	1,401,018
West Virginia	415,433	363,685	51,748	458,960	382,696	76,264
Wisconsin	6,675,038	4,392,481	2,282,557	6,387,140	4,523,792	1,863,348
Wyoming	803,260	720,359	82,901	856,604	736,403	120,201
United States	190,293,125	140,219,365	50,073,760	195,122,894	144,291,271	50,831,623

P = preliminary. State-level cash receipts and expenses are estimated by USDA by commodity and by expense component. These estimates are returned to each state for review and revision and are currently being incorporated into the national accounts. As a result, the estimates in this article do not necessarily agree with the estimates in other sections of this report nor in the Appendix tables. The final 1990 estimates will appear in the December issue of this magazine.

Table A-3--State rankings for net farm income: total, per farming operation, and per acre, 1990

Rank	Total: State	Total: Value ($1000)	Per operation: State	Per operation: Value (dollars)	Per acre: State	Per acre: Value (dollars)
1	California	7,030,358	California	82,710	Rhode Island	522
2	Texas	3,370,735	Arizona	74,652	Connecticut	448
3	Iowa	2,964,377	Delaware	58,833	Delaware	299
4	Minnesota	2,503,734	Florida	55,437	New Jersey	283
5	Florida	2,272,904	Idaho	49,999	California	228
6	Nebraska	2,127,957	Rhode Island	49,391	Massachusetts	219
7	North Carolina	1,968,426	Connecticut	48,217	Florida	209
8	Wisconsin	1,863,348	Washington	37,865	North Carolina	203
9	Illinois	1,704,924	Nebraska	37,333	Maryland	190
10	Washington	1,401,018	South Dakota	36,701	Pennsylvania	141
11	Kansas	1,378,033	Nevada	34,901	New York	111
12	South Dakota	1,284,526	Colorado	32,947	Wisconsin	106
13	Arkansas	1,203,760	North Carolina	31,749	Maine	104
14	Ohio	1,172,561	New Jersey	30,445	Iowa	88
15	Pennsylvania	1,138,676	Iowa	28,504	Washington	88
16	Oklahoma	1,109,756	Minnesota	28,132	Michigan	87
17	Idaho	1,089,987	Maryland	28,090	Georgia	86
18	Georgia	1,075,953	Arkansas	25,612	Vermont	84
19	Indiana	1,053,743	New Mexico	24,975	Minnesota	83
20	Kentucky	1,038,106	New York	24,272	Alabama	81
21	Michigan	940,481	North Dakota	23,588	New Hampshire	81
22	New York	934,471	Oregon	23,338	Idaho	80
23	Missouri	873,944	Wisconsin	23,292	Arkansas	78
24	Colorado	873,108	Georgia	22,416	Ohio	75
25	Oregon	851,822	Massachusetts	21,574	Kentucky	74
26	Alabama	822,562	Pennsylvania	21,484	Louisiana	71
27	North Dakota	802,006	Maine	20,925	Indiana	65
28	Louisiana	631,718	Illinois	20,541	Virginia	61
29	Mississippi	616,033	Kansas	19,971	Illinois	60
30	Arizona	582,282	Louisiana	19,741	South Carolina	53
31	Virginia	542,196	Hawaii	18,325	Hawaii	49
32	Tennessee	460,637	Utah	18,161	Oregon	48
33	Maryland	426,975	Texas	18,122	Mississippi	47
34	Montana	386,646	Vermont	18,114	Nebraska	45
35	New Mexico	337,169	Alabama	17,501	Tennessee	37
36	South Carolina	273,658	Michigan	17,416	Oklahoma	34
37	New Jersey	246,602	Oklahoma	15,854	South Dakota	29
38	Utah	239,721	Montana	15,654	Kansas	29
39	Connecticut	188,048	Indiana	15,496	Missouri	29
40	Delaware	170,617	Mississippi	15,401	Colorado	26
41	Maine	150,661	Ohio	13,959	Texas	26
42	Massachusetts	148,861	New Hampshire	13,671	Utah	21
43	Vermont	126,797	Wyoming	13,506	West Virginia	21
44	Wyoming	120,201	Alaska	12,959	North Dakota	20
45	Nevada	87,252	Virginia	11,787	Arizona	16
46	Hawaii	84,297	Kentucky	11,162	Nevada	10
47	West Virginia	76,264	South Carolina	10,946	New Mexico	8
48	New Hampshire	39,647	Missouri	8,092	Alaska	8
49	Rhode Island	36,549	Tennessee	5,176	Montana	6
50	Alaska	7,516	West Virginia	3,720	Wyoming	3
	United States	50,831,623	United States	23,748	United States	51

Table A-4--Value of farm business assets (excluding households), by State, December 31, 1990

State	Real Estate: Land	Real Estate: Farm buildings	Nonreal estate: Livestock and poultry	Nonreal estate: Machinery and equipment	Nonreal estate: Crops	Nonreal estate: Purchased inputs	Financial assets: Other financial assets	Financial assets: Investments in coops	Total assets
	Million dollars								
Alabama	5,574	928	1,073	1,212	115	15	163	464	9,544
Alaska	179	25	5	23	0	0	7	300	539
Arizona	9,021	388	552	434	38	35	61	157	10,686
Arkansas	9,188	1,466	1,101	1,619	134	31	215	687	14,440
California	55,135	5,400	3,603	4,177	311	194	942	1,596	71,358
Colorado	10,994	1,098	290	1,310	344	112	166	492	14,807
Connecticut	2,758	202	65	144	26	6	33	56	3,289
Delaware	967	176	29	155	36	1	17	53	1,435
Florida	20,177	1,635	1,185	1,424	39	19	245	867	25,593
Georgia	8,991	1,461	940	1,556	133	27	250	1,331	14,689
Hawaii	2,576	146	106	189	0	6	39	105	3,167
Idaho	7,278	736	1,209	1,204	643	48	109	260	11,486
Illinois	35,255	2,548	1,800	5,049	2,012	158	456	1,023	48,300
Indiana	15,870	2,176	1,162	3,021	1,168	114	294	1,009	24,813
Iowa	32,459	3,446	4,337	5,486	2,691	203	427	1,603	50,652
Kansas	18,993	1,296	3,670	3,472	475	68	287	640	28,901
Kentucky	9,273	1,948	1,604	2,105	773	32	316	662	16,719
Louisiana	6,556	615	597	1,224	[illegible]	9	155	-559	8,677
Maine	868	232	96	275	108	23	28	57	1,692
Maryland	3,570	597	63	678	160	11	50	221	5,379
Massachusetts	2,934	337	57	221	20	4	42	110	3,725
Michigan	7,930	1,640	1,046	2,477	529	87	252	516	14,478
Minnesota	19,427	3,253	2,345	4,953	1,871	205	347	1,720	34,120
Mississippi	7,553	721	737	1,394	134	17	178	611	11,345
Missouri	15,938	1,911	3,035	3,065	836	69	437	1,133	26,423
Montana	12,339	1,141	1,874	1,498	507	46	139	317	17,861
Nebraska	22,425	1,992	4,516	3,346	1,386	131	294	597	34,686
Nevada	2,061	287	336	131	56	6	25	46	2,949
New Hampshire	790	153	37	98	12	7	10	20	1,126
New Jersey	6,584	612	64	305	28	11	90	99	7,794
New mexico	9,049	559	857	446	63	25	74	253	11,326
New york	5,446	1,810	1,258	1,887	534	64	197	538	11,733
North Carolina	8,717	1,281	816	1,882	238	30	249	792	14,005
North Dakota	12,894	1,050	1,288	2,631	813	87	195	1,115	20,074
Ohio	13,693	2,381	1,306	3,353	926	72	443	947	23,121
Oklahoma	12,853	1,027	3,122	2,059	256	37	339	602	20,295
Oregon	7,431	1,118	998	1,384	227	37	210	440	11,847
Pennsylvania	9,742	2,317	1,527	2,203	696	65	211	598	17,360
Rhode Island	341	41	6	27	2	0	5	11	431
South Carolina	3,997	364	352	780	60	34	110	501	6,199
South Dakota	12,861	1,386	2,659	1,922	863	86	162	494	20,433
Tennessee	8,444	1,224	1,319	2,017	348	31	358	745	14,485
Texas	53,789	3,112	8,633	5,636	583	252	1,241	1,724	74,970
Utah	3,701	320	583	470	113	14	60	51	5,311
Vermont	1,113	302	233	322	60	6	31	89	2,158
Virginia	8,049	1,656	1,084	1,389	297	24	235	533	13,267
Washington	9,608	1,524	1,007	1,696	334	62	204	445	14,879
West Virginia	1,473	308	295	358	90	6	72	43	2,646
Wisconsin	9,039	3,325	3,315	4,316	1,093	138	298	1,373	22,897
Wyoming	4,412	372	900	406	163	17	52	162	6,485
United States	55,0316	64,043	69,093	87,428	22,424	2,793	10,848	27,650	834,595

Note: Totals may not add due to rounding.

Table A-5--Real estate debt (excluding households), by State and lender, December 31, 1990

State	Federal Land Banks	Farmers Home Administration	Life insurance companies	Commercial banks	CCC storage and drying facility	Individuals and others	Total
	Million dollars						
Alabama	216	91	44	240	0.08	100	691
Alaska	7	0	8	1	.00	4	19
Arizona	155	50	196	103	.00	125	629
Arkansas	492	253	277	464	.18	177	1,663
California	2,688	217	2,453	918	.03	1,203	7,479
Colorado	698	97	201	185	.20	331	1,512
Connecticut	49	13	0	21	.00	15	98
Delaware	87	12	0	36	.00	20	155
Florida	732	105	845	681	.20	304	2,668
Georgia	575	154	138	528	.13	144	1,539
Hawaii	108	29	30	46	.00	9	222
Idaho	479	214	156	33	.19	294	1177
Illinois	1,192	290	438	1,344	.45	800	4,065
Indiana	736	229	261	758	.02	694	2,679
Iowa	1,248	396	549	1,236	.52	1,820	5,249
Kansas	1,002	241	195	608	.00	381	2,427
Kentucky	371	247	114	594	.05	251	1,578
Louisiana	226	126	159	164	.25	87	761
Maine	38	49	0	6	.04	14	107
Maryland	281	36	10	98	.00	108	534
Massachusetts	48	23	21	7	.00	16	115
Michigan	657	162	34	198	.22	339	1,390
Minnesota	980	262	210	711	1.24	951	3,115
Mississippi	293	241	286	321	.12	139	1,279
Missouri	582	333	203	927	.11	538	2,584
Montana	549	178	195	143	.07	503	1,568
Nebraska	746	336	352	686	.17	579	2,700
Nevada	67	18	36	3	.00	46	170
New Hampshire	14	7	0	3	.00	7	32
New Jersey	137	24	0	26	.00	66	253
New Mexico	200	64	68	114	.00	130	576
New York	397	153	9	114	.11	212	885
North Carolina	625	219	82	302	.01	147	1,375
North Dakota	779	309	35	278	.12	277	1,678
Ohio	620	164	125	568	.10	372	1,849
Oklahoma	606	299	157	333	.01	313	1,709
Oregon	482	106	432	78	.03	482	1,581
Pennsylvania	466	125	11	434	.01	210	1,246
Rhode Island	8	3	0	2	.00	1	14
South Carolina	303	83	16	70	.03	52	524
South Dakota	475	352	49	176	.29	329	1,381
Tennessee	371	211	37	357	.13	138	1,114
Texas	1,924	346	543	848	.06	930	4,592
Utah	137	57	11	36	.12	126	367
Vermont	60	43	0	45	.02	28	176
Virginia	629	87	86	218	.06	135	1,155
Washington	478	147	314	181	.18	340	1,460
West Virginia	75	43	79	51	.00	21	268
Wisconsin	872	252	57	767	.97	570	2,519
Wyoming	183	43	78	31	.01	114	450
United States	25,144	7,544	9,599	16,092	6.51	14,992	73,377

Note: Totals may not add due to rounding.

Table A-6--Nonreal estate debt (excluding households), by state and lender, December 31, 1990

State	Commercial banks	PCAs and FICBs	Farmers Home Administration	Individuals and others	Total	CCC commodity loans
			Million dollars			
Alabama	221	186	97	213	716	[illegible]
Alaska	4	0	0	2	6	0
Arizona	423	69	105	158	755	27
Arkansas	525	110	320	313	1,267	316
California	2,829	1,229	504	1,067	5,629	202
Colorado	676	160	77	429	1,341	53
Connecticut	24	63	[illegible]	25	120	0
Delaware	60	40	5	56	161	1
Florida	284	223	165	279	950	1
Georgia	309	153	388	284	1,133	9
Hawaii	40	49	11	29	129	0
Idaho	677	120	145	196	1,138	40
Illinois	1,964	261	202	545	2,972	420
Indiana	906	311	177	380	1,774	170
Iowa	2,859	169	368	819	4,216	625
Kansas	2,018	228	162	691	3,099	99
Kentucky	405	161	173	181	919	28
Louisiana	252	172	492	136	1,053	107
Maine	24	73	61	38	196	0
Maryland	43	211	19	116	388	7
Massachusetts	72	75	12	25	184	0
Michigan	357	337	231	236	1,161	78
Minnesota	1,669	488	355	551	3,063	516
Mississippi	327	84	564	182	1,157	177
Missouri	1,023	133	285	331	1,772	86
Montana	478	88	251	121	938	66
Nebraska	2,384	185	231	808	3,608	471
Nevada	18	32	9	20	77	0
New Hampshire	1	22	4	10	37	0
New Jersey	15	79	27	37	159	2
New Mexico	194	45	47	129	414	7
New York	417	416	219	216	1,268	18
North Carolina	260	305	167	356	1,087	19
North Dakota	744	373	447	198	1,762	211
Ohio	517	266	173	318	1,274	103
Oklahoma	1,200	141	391	287	2,019	19
Oregon	405	136	87	145	773	22
Pennsylvania	249	347	113	288	997	9
Rhode Island	0	15	2	3	20	0
South Carolina	77	64	151	94	386	5
South Dakota	1,058	136	404	233	1,830	132
Tennessee	232	164	244	201	841	26
Texas	2,460	769	769	986	4,984	145
Utah	134	63	34	58	290	2
Vermont	37	76	17	37	168	0
Virginia	180	271	126	166	743	9
Washington	1,026	56	101	228	1,412	55
West Virginia	24	46	23	29	121	1
Wisconsin	955	445	374	413	2,187	81
Wyoming	216	54	37	78	385	2
United States	31,267	9,699	9,374	12,740	63,081	4,377

Note: Totals may not add due to rounding.

Table A-7--Farm balance sheet components (excluding households), by State, December 31, 1990

State	Assets: Real estate	Assets: Nonreal estate	Assets: Total	Debt: Real estate	Debt: Nonreal estate	Debt: Total	Equity	Debt to asset ratio
	Million dollars							Percent
Alabama	6,502	3,042	9,544	691	716	1,407	8,138	14.7
Alaska	204	335	539	19	6	26	514	4.7
Arizona	9,409	1,277	10,686	629	755	1,385	9,302	13.0
Arkansas	10,654	3,787	14,440	1,663	1,267	2,930	11,510	20.3
California	60,535	10,823	71,358	7,479	5,629	13,108	58,250	18.4
Colorado	12,092	2,715	14,807	1,512	1,341	2,854	11,953	19.3
Connecticut	2,960	330	3,289	98	120	219	3,071	6.7
Delaware	1,143	292	1,435	155	161	316	1,119	22.0
Florida	21,812	3,780	25,593	2,668	950	3,618	21,975	14.1
Georgia	10,452	4,237	14,689	1,539	1,133	2,672	12,016	18.2
Hawaii	2,722	445	3,167	222	129	351	2,816	11.1
Idaho	8,014	3,472	11,486	1,177	1,138	2,314	9,172	20.1
Illinois	37,802	10,498	48,300	4,065	2,972	7,037	41,263	14.6
Indiana	18,046	6,767	24,813	2,679	1,774	4,454	20,359	17.9
Iowa	35,905	14,746	50,652	5,249	4,216	9,465	41,187	18.7
Kansas	20,289	8,613	28,901	2,427	3,099	5,526	23,376	19.1
Kentucky	11,222	5,497	16,719	1,578	919	2,498	14,221	14.9
Louisiana	7,171	1,506	8,677	761	1,053	1,814	6,863	20.9
Maine	1,101	591	1,692	107	196	304	1,388	17.9
Maryland	4,166	1,212	5,379	534	388	922	4,457	17.1
Massachusetts	3,271	454	3,725	115	184	299	3,426	8.0
Michigan	9,570	4,908	14,478	1,390	1,161	2,551	11,928	17.6
Minnesota	22,681	11,439	34,120	3,115	3,063	6,178	27,942	18.1
Mississippi	8,274	3,070	11,345	1,279	1,157	2,436	8,909	21.5
Missouri	17,849	8,574	26,423	2,584	1,772	4,356	22,068	16.5
Montana	13,480	4,381	17,861	1,568	938	2,506	15,354	14.0
Nebraska	24,416	10,270	34,686	2,700	3,608	6,308	28,378	18.2
Nevada	2,348	601	2,949	170	77	247	2,702	8.4
New Hampshire	943	183	1,126	32	37	69	1,057	6.2
New Jersey	7,195	598	7,794	253	159	412	7,382	5.3
New Mexico	9,608	1,718	11,326	576	414	990	10,336	8.7
New York	7,256	4,478	11,733	885	1,268	2,154	9,579	18.4
North Carolina	9,998	4,008	14,005	1,375	1,087	2,462	11,544	17.6
North Dakota	13,945	6,129	20,074	1,678	1,762	3,440	16,633	17.1
Ohio	16,074	7,047	23,121	1,849	1,274	3,123	19,998	13.5
Oklahoma	13,880	6,416	20,295	1,709	2,019	3,727	16,568	18.4
Oregon	8,550	3,297	11,847	1,581	773	2,353	9,493	19.9
Pennsylvania	12,060	5,300	17,360	1,246	997	2,244	15,116	12.9
Rhode Island	382	50	431	14	20	34	397	7.9
South Carolina	4,360	1,838	6,199	524	386	909	5,289	14.7
South Dakota	14,247	6,186	20,433	1,381	1,830	3,211	17,223	15.7
Tennessee	9,668	4,817	14,485	1,114	841	1,954	12,531	13.5
Texas	56,901	18,069	74,970	4,592	4,984	9,575	65,395	12.8
Utah	4,021	1,290	5,311	367	290	657	4,654	12.4
Vermont	1,415	742	2,158	176	168	344	1,814	15.9
Virginia	9,705	3,562	13,267	1,155	743	1,898	11,369	14.3
Washington	11,132	3,747	14,879	1,460	1,412	2,872	12,008	19.3
West Virginia	1,781	864	2,646	268	121	389	2,257	14.7
Wisconsin	12,365	10,533	22,897	2,519	2,187	4,706	18,191	20.6
Wyoming	4,784	1,700	6,485	450	385	835	5,649	12.9
United States	614,359	220,236	834,595	73,377	63,081	136,458	698,138	16.4

Note: Totals may not add due to rounding.

Appendix table 1--Farm income, assets and debt, and returns, 1986-91

Item	1986	1987	1988	1989	1990P	1991F
	Billion dollars					
Income and total returns:						
1. Gross farm income 1/	152	164	169	185	190	182 to 186
2. Wages and perquisites to hired labor	9	9	10	11	12	12 to 13
3. Other operating expenses, excluding interest	75	80	84	89	92	89 to 93
4. Capital consumption	16	15	15	16	16	15 to 17
5. Net income from assets and operators' labor and management (1-2-3-4) 2/	52	60	61	69	70	62 to 66
6. Income imputed to operators' labor and management	24	24	25	26	28	28 to 32
7. Residual income to assets (5-6)	28	35	35	43	42	33 to 37
8. Real capital gain to assets	-57	21	10	-19	-27	-16 to -20
9. Total return from assets (7+8)	-29	56	45	24	16	16 to 20
10. Interest paid	16	15	14	14	14	13 to 15
11. Real capital gain to debt	4	7	5	6	7	5 to 6
12. Total return to equity (9-10+11)	-41	49	37	6	[illegible]	7 to 9
13. Real capital gain to assets and debt (8+11)	-53	28	16	-13	-20	-1 to -5
14. Residual income to equity (12-13)	12	21	21	29	28	19 to 23
Balance sheet: 3/						
15. Assets	724	773	805	820	835	845 to 855
16. Debt	157	144	139	137	136	135 to 141
17. Equity (15-16)	568	628	666	682	698	705 to 715
	Percent					
Rates of return and interest rates:						
18. Rate of return on assets (ROA) (7/15)	3.8	4.8	4.8	5.5	5.2	4 to 5
19. Real capital gain on assets (8/15)	-7.6	2.8	1.3	-2.3	-3.2	-2 to -3
20. Total real return on assets (18+19)	-3.8	7.6	5.8	3.2	2.0	2 to 3
21. Av. interest rate paid on debt (10/16)	9.5	9.7	10.3	10.3	9.8	10 to 11
22. Real capital gains on debt (11/16)	2.5	4.8	3.8	4.4	4.7	3 to 4
23. Real cost of debt (21-22)	7.0	4.9	6.3	5.8	5.5	6 to 7
24. Rate of return on equity (ROE) ((7-10)/17)	2.1	3.6	3.3	4.5	4.2	3 to 4
25. Real capital gain on equity ((8+11)/17)	-9.1	4.7	2.4	-1.9	-2.9	-1 to -2
26. Total real return on equity (24+25)	-6.9	8.2	5.7	2.6	1.3	1 to 2
27. Net return on assets (NROA) (18-21)	-5.8	-5.0	-5.6	-5.0	-5.2	-5 to -6
28. Spread (20-23) 4/	-10.9	2.6	-0.5	-2.9	-3.7	-4 to -5

P = preliminary, F = forecast. Numbers may not add due to rounding. 1/ Excludes operator dwellings. 2/ Numbers in parentheses indicate components required to calculate a given item. 3/ Excludes operator households and CCC activity. 4/ When total real rate of return on assets exceeds total real cost of debt, debt financing is profitable.

Appendix table 2--Farm income and cash flow statement, 1986-91

Item	1986	1987	1988	1989	1990P	1991F
			Billion dollars			
Farm income sources:						
1. Cash receipts	135.2	141.6	151.0	160.5	169.1	166 to 171
Crops 1/	63.7	65.7	71.5	76.3	79.4	79 to 83
Livestock	71.5	76.0	79.5	84.2	89.7	85 to 89
2. Direct Government payments	11.8	16.7	14.5	10.9	9.3	[redacted] to 9
Cash Government payments	8.1	6.6	7.1	9.1	8.4	7 to [redacted]
Value of PIK commodities	3.7	10.1	7.4	1.7	.9	0 to 1
3. Farm-related income 2/	5.0	6.6	6.3	8.1	6.7	6 to [redacted]
4. Gross cash income (1+2+3) 3/	152.0	164.9	171.8	179.5	185.1	181 to 186
5. Nonmoney income 4/	6.9	5.7	6.2	6.1	6.2	6 to 7
6. Realized gross income (4+5)	158.9	170.6	178.0	185.6	191.3	187 to 193
7. Value of inventory change	-2.4	-2.3	-3.5	4.1	3.1	0 to 3
8. Total gross income (6+7)	156.5	168.3	174.4	189.7	194.4	188 to 193
Production expenses:						
9. Cash expenses 5/ 6/	105.2	109.6	114.4	121.2	125.4	124 to 129
10. Total expenses	125.5	128.6	133.5	140.5	144.8	145 to 149
Income statement:						
11. Net cash income 1/ 6/						
Nominal (4-9)	46.7	55.3	57.4	58.3	59.7	54 to 59
Deflated (1982$) 7/	41.1	47.8	47.3	46.1	45.4	40 to 43
12. Net farm income 1/						
Nominal total net (8-10)	31.0	39.7	41.0	49.2	49.6	41 to 46
Deflated (1982$) 7/	27.3	33.8	33.8	39.0	37.7	31 to 34

P = preliminary, F = forecast. Totals may not add due to rounding. 1/ Includes net CCC loans. 2/ Income from custom work, machine hire, farm recreational activities, forest product sales, and miscellaneous sources. 3/ Numbers in parentheses indicate components required to calculate a given item. 4/ Value of home consumption of farm products and imputed rental value of farm dwellings. 5/ Excludes depreciation and hired labor perquisites. 6/ Excludes farm households. 7/ Deflated by the GNP implicit price deflator.

Appendix table 3--Relationship of net cash to net farm income, 1986-91

Item	1986	1987	1988	1989	1990P	1991F
			Billion dollars			
Gross cash income	152.0	164.9	171.8	179.5	185.1	181 to 186
Minus: Cash expenses	105.2	109.6	114.4	121.2	125.4	124 to 129
Equals: Net cash income	46.7	55.3	57.4	58.3	59.7	54 to 59
Plus: Nonmoney income:						
Gross rental value of dwelling	6.0	4.9	5.4	5.5	5.5	5 to 7
Value of home consumption	.9	.8	.8	.7	.7	0 to 1
Value of inventory change	-2.4	-2.3	-3.5	4.1	3.1	0 to 3
Minus: Noncash expenses:						
Depreciation & accidental damage	17.8	16.7	16.8	17.1	16.9	16 to 19
Labor perquisites	.4	.5	.5	.5	.5	0 to 1
Minus: Household expenses 1/	2.1	1.8	1.7	1.8	2.0	1 to 3
Equals: Net farm income	31.0	39.7	41.0	49.2	49.6	41 to 46

P = preliminary, F = forecast. Totals do not add due to rounding. 1/ Includes expenses related to operator dwellings.

Appendix table 4--Cash receipts, 1986-91

Item	1986	1987	1988	1989	1990P	1991F
			Billion dollars			
Crop receipts: 1/						
Food grains	5.7	5.8	7.5	8.2	7.9	6 to 8
Wheat	5.0	5.0	6.4	7.3	6.8	5 to 7
Rice	.7	.7	1.1	.9	1.1	1 to 2
Feed grains and hay	16.9	14.6	14.3	17.1	19.1	18 to 21
Corn	12.3	9.9	8.9	11.4	13.7	13 to 15
Sorghum, barley, and oats	2.3	2.1	2.2	2.3	2.0	2 to 3
Hay (all)	2.2	2.5	3.0	3.5	3.4	2 to 4
Oil crops	10.6	11.3	13.5	11.9	12.4	11 to 13
Soybeans	9.2	10.0	12.1	10.5	10.9	10 to 11
Peanuts	1.1	1.0	1.1	1.1	1.3	1 to 2
Cotton lint and seed	3.4	4.2	4.5	5.1	5.2	5 to 6
Tobacco	1.9	1.8	2.1	2.4	2.7	2 to 4
Fruits and nuts	7.2	8.1	9.1	9.0	9.2	10 to 13
Vegetables	8.8	9.9	9.8	11.4	11.3	10 to 12
Greenhouse & nursery	5.9	6.7	7.0	7.4	7.6	7 to 9
Other crops 1/	3.3	3.3	3.7	3.7	3.9	3 to 5
TOTAL CROPS	63.7	65.7	71.5	76.3	79.4	79 to 84
Livestock receipts:						
Red meats	39.1	44.5	46.5	46.9	51.7	50 to 53
Cattle and calves	28.9	33.6	36.8	36.9	39.7	38 to 41
Hogs	9.7	10.3	9.2	9.5	11.5	11 to 12
Sheep and lambs	.5	.6	.5	.5	*	0 to 1
Poultry and eggs	12.7	11.5	12.9	15.4	15.3	14 to 16
Broilers	6.8	6.2	7.4	8.8	8.4	8 to 9
Turkeys	1.9	1.7	2.0	2.2	2.4	2 to 3
Eggs	3.5	3.2	3.1	3.9	4.0	3 to 5
Other poultry	.4	.4	.4	.4	.5	0 to 1
All dairy products	17.7	17.7	17.6	19.4	20.2	17 to 19
Other livestock	2.0	2.3	2.4	2.4	2.5	2 to 3
TOTAL LIVESTOCK	71.5	76.0	79.5	84.2	89.7	85 to 89
TOTAL RECEIPTS	135.2	141.6	151.0	160.5	169.1	166 to 171
Program 2/	53.9	52.8	56.3	59.7	64.2	65 to 67
Non-program 3/	81.3	88.8	93.9	99.5	104.9	100 to 103

P = preliminary. F = forecast. * = less than $500 million. Totals may not add due to rounding. 1/ Includes sugar, seed, and other misc. crops. 2/ Receipts from commodities directly supported by farm programs. 3/ Commodities not receiving direct support.

Appendix table 5--Farm income distribution by enterprise type, 1989-91 1/

Item	Crops: Total crops	Crops: Cash grain 2/	Crops: Tobacco	Crops: Cotton	Crops: Fruit/nut/ vegetable	Livestock: Total livestock	Livestock: Red meat	Livestock: Poultry and eggs	Livestock: Dairy
					Thousands				
Number of farms:									
1989	896	466	77	19	94	1,275	1,056	12	200
1990P	884	460	76	19	93	1,259	1,042	12	197
1991F	873	454	75	19	92	1,243	1,029	12	195
Income:					Billion dollars				
1. Cash receipts--									
Crops									
1989	70.5	30.2	2.2	5.0	19.9	5.8	4.4	*	1.0
1990P	73.3	32.0	2.5	5.1	20.0	6.1	4.6	*	1.1
1991F	76	31	3	5	22	6	5	*	1
Livestock									
1989	5.9	4.4	0.2	0.1	0.1	78.3	43.4	13.7	19.8
1990P	6.6	4.9	0.2	0.1	0.1	83.1	47.3	13.6	20.7
1991F	7	5	*	*	*	80	47	13	18
2. Direct Government payments--									
1989	7.2	5.3	0.1	0.9	0.2	3.7	2.5	*	1.1
1990P	6.1	4.5	0.1	0.8	*	3.2	2.1	*	1.0
1991F	5	4	*	1	*	3	2	*	1
3. Gross cash income-- 3/									
1989	87.5	41.6	2.5	6.4	21.0	92.0	52.8	13.8	23.5
1990P	89.3	42.9	2.8	6.3	20.9	95.8	56.2	13.7	24.0
1991F	91	42	3	6	23	93	56	13	22
4. Cash expenses--									
1989	58.5	28.8	2.2	2.7	7.6	62.7	41.9	4.3	17.3
1990P	60.5	29.7	2.3	2.8	8.0	64.9	43.6	4.3	17.7
1991F	62	30	2	3	[illegible]	65	44	4	18
5. Net cash income--									
Current dollars 4/									
1989	29.0	12.8	0.3	3.7	13.4	29.2	10.9	9.5	6.2
1990P	28.8	13.2	0.5	3.5	12.9	30.9	12.6	9.4	6.4
1991F	29	12	1	3	15	28	12	9	4
Deflated ($ 1982)									
1989	23.0	10.1	0.2	2.9	10.6	23.1	8.6	7.6	4.9
1990P	21.9	10.0	0.4	2.7	9.8	23.5	9.6	7.2	4.8
1991F	21	8	*	3	11	20	9	7	3
Balance Sheet 5/									
6. Farm assets--									
Real estate									
1989	307.2	155.6	11.8	8.2	64.3	385.5	309.4	3.1	69.9
1990P	313.7	158.9	12.1	8.3	65.6	393.6	315.9	3.1	71.4
1991F	319	162	12	8	67	400	321	3	73
Nonreal estate									
1989	120.3	73.1	3.8	4.8	13.5	162.4	113.9	1.0	45.5
1990P	125.1	76.1	4.0	5.0	14.0	169.0	118.4	1.1	47.4
1991F	128	78	4	5	14	172	121	1	48
7. Total liabilities--									
1989	74.5	42.2	2.4	4.0	8.4	76.2	49.3	1.0	24.9
1990P	76.8	43.5	2.5	4.1	8.6	78.6	50.8	1.0	25.7
1991F	77	44	3	4	9	79	51	1	26
					Percent				
8. Debt-to-asset ratio--									
1989	17	18	16	31	11	14	12	23	22
1990P	18	19	16	31	11	14	12	24	22
1991F	17	18	16	31	11	14	12	23	21

P = preliminary, F = forecast. * = less than $500 million. Numbers may not add due to rounding. 1/ Farm types are defined as those with 50 percent or more of the total value of production accounted for by a specific commodity or commodity group. 2/ Includes farms earning at least half their receipts from sales of wheat, corn, soybeans, rice, sorghum, barley, oats, or a mix of cash grains. 3/ Equals 1 + 2 + farm related income. 4/ Equals 3 - 4. 5/ Excludes farm households.

Appendix table 6--Farm production expenses, 1986-91

Item	1986	1987	1988	1989	1990P	1991F
	Billion dollars					
Farm-origin inputs	30.8	32.6	36.5	37.7	39.1	37 to 40
Feed	17.9	17.5	20.4	21.0	20.7	20 to 22
Livestock	9.8	11.8	12.8	13.1	14.8	13 to 15
Seed	3.2	3.3	3.4	3.6	3.6	3 to 5
Manufactured inputs	18.2	18.1	18.9	19.9	20.7	20 to 22
Fertilizer	6.8	6.5	6.9	7.2	7.1	7 to 8
Fuels and oils	5.3	5.0	5.1	5.2	5.9	5 to 7
Electricity	1.8	2.2	2.3	2.0	1.9	1 to 3
Pesticides	4.3	4.5	4.6	5.4	5.7	5 to 7
Total interest charges	17.1	15.1	14.8	14.7	14.7	14 to 16
Short-term interest	7.9	6.9	6.9	6.9	7.0	7 to 9
Real estate interest	9.1	8.2	7.9	7.8	7.7	6 to 8
Other operating expenses	30.3	34.4	34.4	38.0	39.5	39 to 43
Repair & maintenance	6.5	7.2	7.2	7.6	7.7	7 to 9
Labor expenses	9.9	10.5	10.7	11.8	13.4	13 to 15
Machine hire & custom work	2.1	2.1	2.4	2.7	2.6	2 to 4
Animal health	1.2	1.3	1.3	1.5	1.5	1 to 2
Marketing, storage & transportation	3.7	4.1	3.5	4.1	4.0	3 to 5
Misc. operating expenses	6.9	9.0	9.3	10.3	10.3	10 to 12
Other overhead expenses	29.2	28.4	28.9	30.2	30.8	30 to 33
Capital consumption	17.7	16.7	16.8	17.1	16.9	16 to 19
Taxes	4.5	4.9	4.8	5.1	5.6	5 to 6
Net rent to nonoperating landlords	7.0	6.9	7.3	8.1	8.3	8 to 9
TOTAL PRODUCTION EXPENSES	125.5	128.6	133.5	140.5	144.8	145 to 150
Cash expenses 1/	105.2	109.6	114.4	121.2	125.4	125 to 129

P = preliminary, F = forecast. 1/ Cash expenses equal total expenses minus depreciation, operator dwelling expenses, and noncash labor benefits.

Appendix table 7a--Balance sheet of the farming sector, excluding operator households, December 31, 1986-91

Item	1986	1987	1988	1989	1990P	1991F
			Billion dollars			
Farm assets	724.5	772.8	805.2	819.8	834.6	845 to 855
Real estate 1/	542.2	578.6	599.4	605.1	614.4	620 to 630
Livestock and poultry	47.8	58.0	62.2	66.2	69.1	68 to 72
Machinery and motor vehicles	81.5	80.0	82.0	85.8	87.4	87 to 91
Crops stored 2/	16.6	17.8	22.7	23.3	22.4	21 to 24
Purchased inputs	2.0	3.3	3.4	2.8	2.8	2 to 4
Financial assets 3/	34.5	35.1	35.4	36.6	38.5	38 to 42
Farm debt	157.0	144.4	139.4	137.1	136.5	135 to 141
Real estate 4/	90.4	82.4	77.6	75.3	73.4	72 to 76
Nonreal estate	66.6	62.0	61.7	61.8	63.1	62 to 66
Total farm equity	567.6	628.4	665.9	682.7	698.2	705 to 715
			Percent			
Selected ratios:						
Debt-to-asset	21.7	18.7	17.3	16.7	16.4	16 to 17
Debt-to-equity	27.7	23.0	20.9	20.1	19.6	19 to 20
Debt-to-net cash income	328.1	260.7	242.6	230.7	220.8	240 to 250

P = preliminary, F = forecast. 1/ Excludes value of operator dwellings. 2/ Non-CCC crops held on farm plus value above loan rate for crops held under CCC. 3/ Excludes time deposits and savings bonds. 4/ Includes CCC storage and drying facility loans.

Appendix table 7b--Balance sheet of the farming sector, including operator households, December 31, 1986-91

Item	1986	1987	1988	1989	1990P	1991F
			Billion dollars			
Farm assets	847.9	911.8	957.0	976.1	996.1	1,010 to 1,020
Real estate	613.0	658.6	687.0	692.7	702.6	715 to 725
Livestock and poultry	47.8	58.0	62.2	66.2	69.1	68 to 72
Machinery and motor vehicles	86.1	84.5	86.7	90.2	91.7	91 to 95
Crops stored 1/	16.6	17.8	22.7	23.3	22.4	21 to 24
Purchased inputs	2.0	3.3	3.4	2.8	2.8	2 to 4
Household goods	28.7	32.9	37.0	42.2	46.3	47 to 51
Financial assets	53.8	56.7	58.0	58.7	61.2	61 to 65
Farm debt	166.6	153.7	148.5	146.0	145.1	143 to 149
Real estate 2/	95.9	87.7	83.0	80.5	78.4	77 to 81
Nonreal estate	70.8	66.0	65.6	65.5	66.7	65 to 69
Total farm equity	681.3	758.0	808.4	830.0	851.1	865 to 875
			Percent			
Selected ratios:						
Debt-to-asset	19.6	16.9	15.5	15.0	14.6	14 to 15
Debt-to-equity	24.5	20.3	18.4	17.6	17.0	16 to 18
Debt-to-net cash income	350.9	277.4	258.5	245.7	234.7	250 to 260

P = preliminary, F = forecast. 1/ Non-CCC crops held on farm plus value above loan rate for crops held under CCC. 2/ Includes CCC storage and drying facility loans.

Appendix table 8--Farm financial ratios: liquidity, solvency, profitability, and financial efficiency, 1986-91

Farm financial ratios	1986	1987	1988	1989	1990P	1991F
			Ratio			
Liquidity ratios:						
Household debt service coverage 1/	4.81	5.70	6.01	6.10	6.7	6.0 to 6.2
Farm business debt service coverage 2/	2.66	3.21	3.41	3.50	3.7	3.3 to 3.5
Debt servicing 3/	.16	.13	.12	.12	.1	.1 to .2
Times interest earned ratio 4/	3.16	3.99	4.11	4.76	4.9	4.2 to 4.4
			Percent			
Solvency ratios:						
Debt/asset 5/	21.7	18.7	17.3	16.7	16.7	16 to 17
Debt/equity 6/	27.7	23.0	20.9	20.1	20.1	19 to 20
			Percent			
Profitability ratios:						
Return on equity 7/	2.1	3.6	3.3	4.5	4.2	3 to 4
Return on assets 8/	3.8	4.8	5.5	5.3	5.2	4 to 5
Net farm to gross cash farm income 9/	20.3	24.1	23.7	27.9	27.5	23 to 25
			Percent			
Financial efficiency ratios:						
Gross ratio 10/	68.7	66.5	66.6	67.0	66.8	61 to 63
Interest to gross cash farm income 11/	10.3	8.8	8.3	7.9	7.4	7 to 8
Asset turnover 12/	20.4	22.1	21.8	22.1	22.5	21 to 22
Net cash farm income to debt ratio 13/	38.0	46.3	50.5	53.3	54.8	50 to 52
			Ratio			
Financial leverage index 14/	.57	.75	.73	.82	.8	.7 to .8

P = preliminary, F = forecast. 1/ Assesses the ability of farm sector households to repay both principal and interest. 2/ Assesses the ability of farm businesses to repay both principal and interest. 3/ Indicates the proportion of gross cash farm income needed to service debt. 4/ Shows the farm sector's ability to service debt out of net income. 5/ Shows the proportion of all assets that are financed with debt. 6/ Measures the relative proportion of funds provided by creditors (debt) and owners (equity). 7/ Measures the ability of farm sector management to realize an adequate return on the capital invested by the owner(s). 8/ Measures how efficiently managers use farm assets. 9/ The profit margin indicates profits earned per dollar of gross income. 10/ Gives the portion of gross cash farm income absorbed by production expenses (claims on farm businesses). 11/ Gives the proportion of gross cash farm income committed to interest payments. 12/ Measures the gross farm income generated per dollar of farm business assets. 13/ Indicates the burden placed on net cash farm income to retire outstanding debt. 14/ Indicates whether or not the use of financial leverage is beneficial.

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List of Tables